

“This is way more complicated than anyone expected ...”

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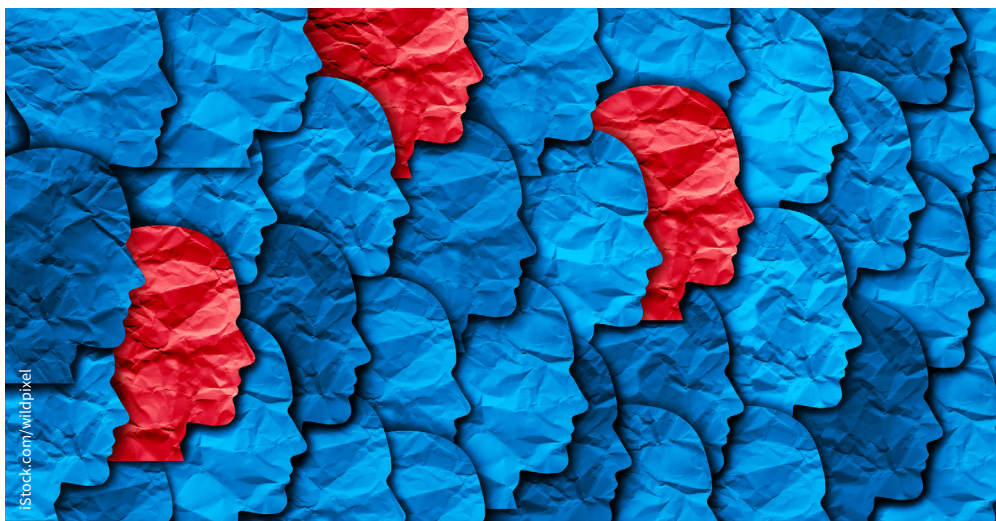
As new as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is, there is something familiar about the global response — many of the public health leaders around the world are veterans of the worst days of the HIV/AIDS pandemic in the 1980s and 1990s. Among them are Drs. Anthony Fauci and Deborah Birx in the United States, Dr. Salim Abdool Karim in South Africa, Dr. Peter Piot in Europe, and Dr. Catherine Hankins here in Canada.

Hankins, a professor of population and public health at McGill University and co-chair of Canada’s COVID-19 Immunity Task Force, talked to *CMAJ* about the lessons HIV researchers learned that can apply to the present pandemic and her opinion of Canada’s response so far. The interview has been edited for length and clarity.

CMAJ: There are a lot of familiar faces leading the response to COVID-19. What is the connection between HIV and COVID-19?

Hankins: It’s partly to do with leadership qualities, and partly because most of those people came from an infectious disease or public health background. They have been fighting an epidemic, [albeit a sexually transmitted and bloodborne one,] for nearly 40 years. HIV taught them a lot of humility, and that this is not just about the science; [they’ve learned] that it’s very important to involve communities as full partners in the response, and that there are socioeconomic and cultural dimensions to everything.

I’m glad that we have 25 to 30 years of immune science as a result of HIV to build on because it’s clear that the cell-mediated immunity part of COVID-19 is



Dr. Catherine Hankins talks about the “humbling and sobering” work of Canada’s COVID-19 Immunity Task Force.

really important. You just have to look at the disease spectrum [of COVID-19] to understand what the immune system is trying to do and how it goes haywire in some people. There’s an antibody-dependent enhancement that goes on after your body is almost on top of it, that takes off into a long tail of immune responses that are so deleterious that people end up suffering organ damage.

We don’t have high-throughput assays [automated equipment to rapidly test many samples] for the cellular immune system so we’re having to use the antibodies, the humoral response, as an indication [of immune status]. But every day we find out something new about waning antibodies, the correlation between severity of symptoms and antibody levels, the numbers of asymptomatic infections that we were not aware of. It’s humbling and sobering. As each day goes by, everyone is realizing that this is way more complicated than anyone expected.

It’s made me realize that we need to think about how we go from this all-of-government response which has been pretty effective, more or less, depending on which province you’re in, to an all-of-society response. That may be beyond the immunity task force — it may be much broader.

CMAJ: You say the Canadian response has been “pretty effective.” What do you think the weaknesses have been so far?

Hankins: No other country has had 81% of their deaths in long-term care populations. Personal support workers in long-term care are the lowest paid of anyone in the health care sector, they do part-time work and they work in several facilities, which facilitates spread between the facilities. That’s something that British Columbia picked up right away, but there was no transfer of that learning to Quebec and Ontario.

We've been slow on testing ... people who were sick but not too bad were told they couldn't be tested.

And we've been slow on [mandating] masks.

CMAJ: Are there any areas where Canada is strong?

Hankins: We're doing well on the research side. We're investing in vaccine research and global efforts, including building global solidarity to overcome vaccine nationalism.

For example, regarding the immune science component, we have been teaming up with the Canadian Institutes of Health Research (CIHR) to see if we can work with some of the researchers who had high-scoring proposals within our remit but didn't get CIHR funding.

In a CIHR grant competition addressing COVID-19 — the full spectrum of social science, basic science, clinical science, etc. — the [scoring] cut-off was really high for the ones that were funded.

For those that weren't funded but were within the task force's remit and scored well, we sent them a letter asking if they would be interested in discussing their proposals with us. We looked at three different areas: testing (the development of different assays, different ways of doing testing), immune science, and field studies.

It's not that the task force is a bank and we'll top up [research groups'] funding, but we want to see if any of them fill a gap or complement what we want to do.

CMAJ: One difference between the HIV and COVID-19 eras is the explosion of information, including the release of studies before they've been peer-reviewed. Is that helpful, overwhelming, or a mixed blessing?

Hankins: It's helpful and frustrating. There's just a huge amount of knowledge being generated on a daily basis around the world that needs to be sorted through. We need to be on top of it all

and questioning what comes forward. If you see an outlier, is that possible or not? Has it been corroborated by anybody else? This is tricky for the public — it creates doubt in the public when it's just the scientific method. Scientists question everything.

We're looking for information that will inform decisions about relaxing the stringent lockdown, and on the other hand, will inform where we can best deploy vaccines when they become available.

CMAJ: The public response here seems to have been more reasoned than in the United States, hasn't it?

Hankins: People have been doing well, but they're getting tired of the seclusion and the economic pain. They want to get out and get going and get the economy started, and we've got to figure out how to do this as safely as we can. It's back to the old harm reduction principles of HIV.

Terry Murray, Toronto, Ont.